

Hooking up GAE & Paypal

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Towards our first Billion!

- Have app/website can earn!
 - Just need a payment provider
- Paypal is a very popular choice
 - Payment via Paypal account or Credit Card
- Does Paypal work with the GAE?
 - Yes*

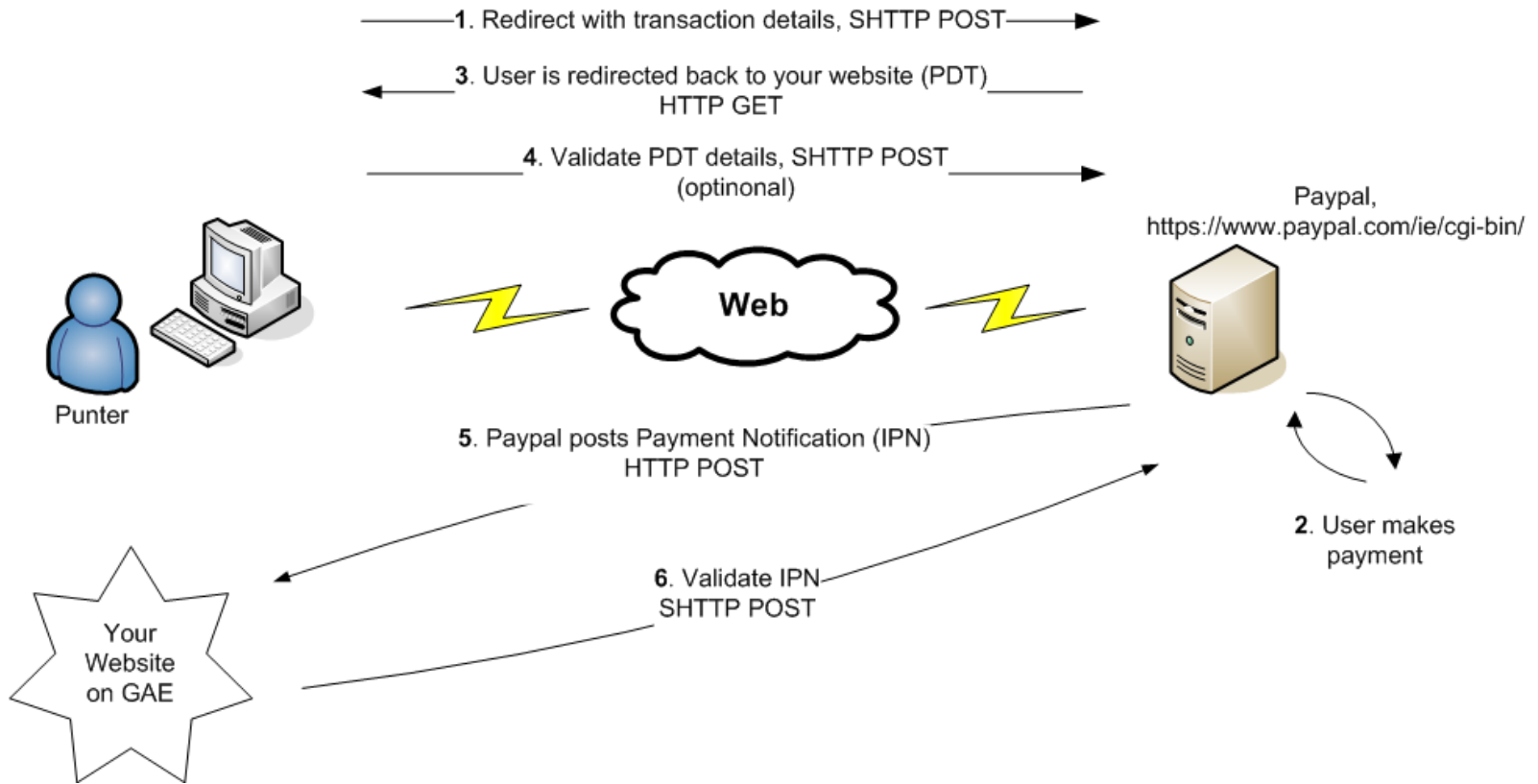
2 sides of a single coin

- Two main ways of taking payment online
- Gateway / Web API
 - Collect Payment details on your site
 - Very flexible & Customisable
 - Need a secure Host
- Redirect
 - Redirect to secure payment provider
 - No need for Secure Host

Does GAE support SHTTP/SSL?

- Yes* (same gotcha as before!)
 - Works with *mywebsite.appspot.com*
 - Not with *my-real-domain.com*
- *GAE will support SSL in future - Buisness Package (when?)*
- *So Redirect is practical choice.*
 - *Paypal - 'Website Payments Standard'*

The Anatomy of a Paypal Redirect



The Redirect

- Our basket is full, time to dust off the Visa...

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1. Select Languages 2. Confirm Order 3. Purchase Translations

You have selected the following languages for translating your app:

Language	Translation Type	Translation Price*
Spanish	Professional	\$43.31
Korean	Standard	\$38.87

Total Price*: \$ 82.18
* All Prices Quoted In US Dollars (USD)

Please confirm you have read and accepted the [Terms of Service](#)

Purchase Translations Back

The SHTTP request


```
<form action="https://www.sandbox.paypal.com/cgi-bin/webscr" method="post">  
  
<input type="hidden" name="cmd" value="_cart">  
<input type="hidden" name="upload" value="1">  
<input type="hidden" name="business" value="9X28C3EEYLPY4">  
  
<input type="hidden" name="custom"  
  value="eyJwcm9qZWNOX2lkIjogIjU1NSIsICJ0cmFuc2FjdGlvbl9pZCI6IDY0OX0=">  
  
<input type="hidden" name="return"  
  value="http://www.tethras.com/purchase_confirm?projID=555">  
  
<input type="hidden" name="notify_url"  
  value="http://www.tethras.com/paypal_ipn">  
  
<input type="hidden" name="item_name_1" value="Spanish (es) - Professional">  
<input type="hidden" name="amount_1" value="43.31">  
<input type="hidden" name="quantity_1" value="1">  
  
<input type="hidden" name="item_name_2" value="Korean (ko) - Standard">  
<input type="hidden" name="amount_2" value="38.87">  
<input type="hidden" name="quantity_2" value="1">  
  
</form>
```

And with the wind behind us..

Your order summary

Descriptions	Amount
<u>Spanish (es) - Professional</u> Item price: \$43.31 Quantity: 1	\$43.31
<u>Korean (ko) - Standard</u> Item price: \$38.87 Quantity: 1	\$38.87
Item total	\$82.18
	Total \$82.18 USD

Choose a way to pay

Pay with my PayPal account 

Email

PayPal password

[Problem with Login?](#)

Pay with a debit or credit card
If you don't have a PayPal account

[Site Feedback](#) [-]

PayPal. The safer, easier way to pay. For more information, read our [User Agreement](#) and [Privacy Policy](#).

The Return - PDT

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Thank you for your purchase

You payment has been successfully processed. To view your project click [here](#).

- Returns to the URL provided in the initial request
- `http://www.tethras.com/purchase_confirm?tx=blahblah&st=Completed&amt=86.62&cc=USD&cm=blahblahblah`
- But you can't trust it!
 - So either ignore it **or** ask Paypal to validate it

Validate PDT - send the transaction id back to Paypal:

```
# Handler for /purchase_confirm
class purchase_confirm(webapp.RequestHandler):
    def get(self):
        if self.validate_pdt() == TRANSACTION_VALID:
            self.response.out.write('Thank you, enjoy your genuine Irish Leprechaun')
        else:
            self.response.out.write('No genuine Irish Leprechauns for you pal!')

    def validate_pdt(self):
        transaction_id = self.request.get('tx')

        params = {}
        params['cmd'] = '_notify-synch'
        params['tx'] = transaction_id
        params['at'] = _get_identity_token()
        params = urllib.urlencode(params)

        # Do a post-back to validate the transaction data
        try:
            response = urlfetch.fetch(url = _get_paypal_url(), method = urlfetch.POST,
                                      payload = params).content
        except Exception:
            return TRANSACTION_NOT_VERIFIED

        if re.search('SUCCESS', response):
            return _check_pdt_transaction_details(response)
        else:
            return TRANSACTION_INVALID
```

PDT Validation Response

- Check for 'SUCCESS', check *payment_status* and other details like transaction total etc.

```
SUCCESS
mc_gross=43.31
invoice=662
protection_eligibility=Ineligible
item_number1=
tax=0.00
item_number2=
payer_id=KYHT65EHVDWCS
payment_date=01%3A50%3A04+Sep+27%2C+2010+PDT
payment_status=Completed
charset=windows-1252
mc_shipping=0.00
mc_handling=0.00
first_name=Test
mc_fee=1.56
custom=eyJwcm9qZWNOX2lkIjogIjU1NSIsICJ0cmFuc2FjdGlvb19pZCI6IDY2Mn0%3D
payer_status=verified
... And on it goes for ages....
```

The IPN POST (from Paypal)

- Contains many transaction details...

```
mc_gross=33.69&
protection_eligibility=Ineligible&
item_number1=1&
payer_id=KYHT65EHVDWCS&
tax=0.00&
payment_date=03%3A39%3A18+Aug+23%2C+2010+PDT&
payment_status=Completed&
charset=windows-1252&
mc_shipping=0.00&
mc_handling=0.00&
first_name=Test&
mc_fee=1.28&
notify_version=3.0&
custom=eyJwcm9qZWNOX21kIjogIjYOMDA0IiwgInRyYW5zYWNOaW9uX21kIjogNzMwMDR9&
payer_status=verified&
business=seller_1281025230_biz%40tethras.com&num_cart_items=1&
```

Validate IPN

- Send all the POST data back to Paypal, expect one word in response - VERIFIED

```
# Handler for /validate_ipn
class validate_ipn(webapp.RequestHandler):
    def post(self):
        if self.validate_ipn() == TRANSACTION_VALID:
            process_order()
        else:
            handle_ipn_error()

    def validate_ipn(self, handler):
        parameters = self.request.POST.copy()
        parameters['cmd'] = '_notify-validate'
        params = urllib.urlencode(parameters)

        try:
            response = urlfetch.fetch(url = _get_paypal_url(),
                                     method = urlfetch.POST, payload = params).content
        except Exception:
            return TRANSACTION_NOT_VERIFIED

        if not re.match("VERIFIED", response):
            return TRANSACTION_INVALID

        return _check_ipn_transaction_details(response)
```

Wads of Cash!

- Look out for the PayPalX Platform for Python
- Any Questions?